JULY 1947

FIREMEN

FIFTY-FIRST YEAR • NATIONAL FIRE PROTECTION ASSOCIATION

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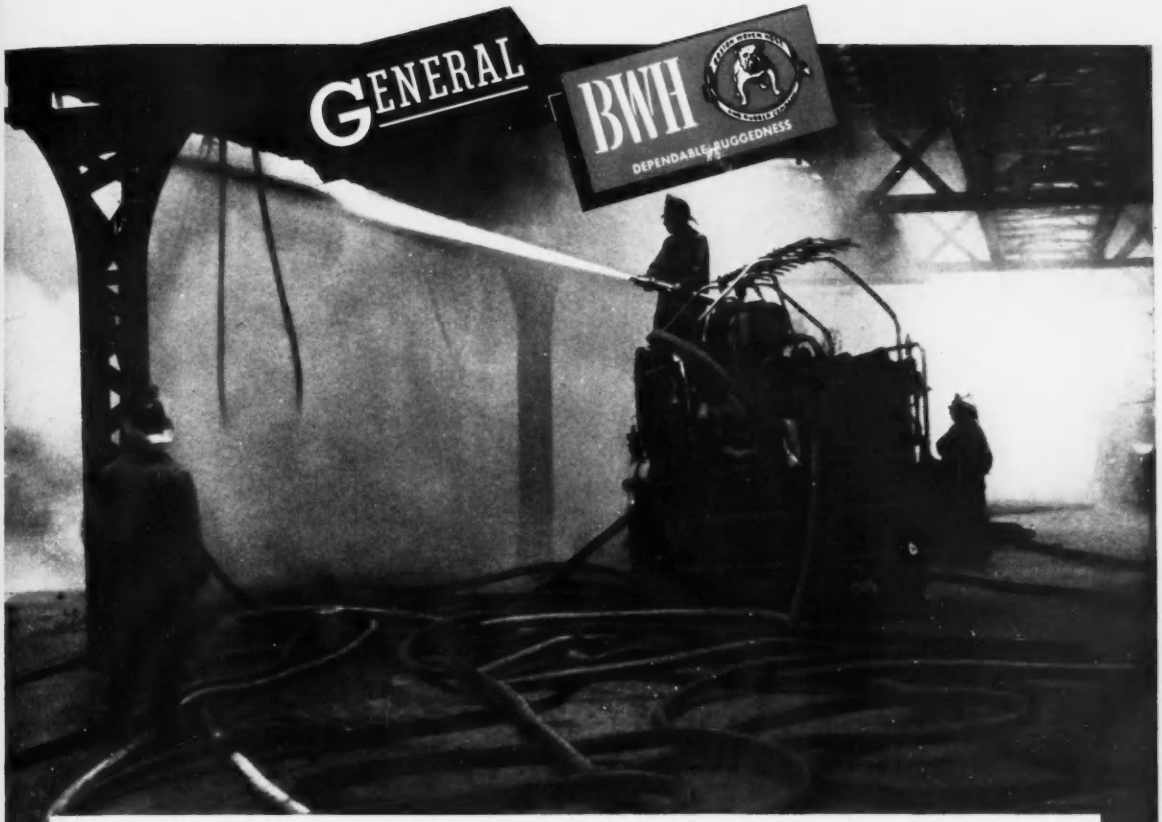

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Firemen

Volume 14 Number 7

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THE COVER PICTURE (*Press Association*) shows the destruction of the three-story stone walled administration building of Muhlenberg College, Allentown, Pa., on May 30. Fire of undetermined origin apparently started in the bell tower and several students were overcome by smoke when attempting to salvage equipment. Destroyed in the fire was a valuable manuscript to which the head of the college's history department had devoted 25 years. The work was irreplaceable because archives in France, Belgium, and England, upon which the historical study was based, were destroyed in the recent war. Direct fire loss to the 43-year-old building was estimated at $250,000.

U. S. FIRE LOSSES for May totaled $56,545,000, according to National Board of Fire Underwriters' estimates. Losses for the year ending May 31 were $626,857,000.

THE FOLLOWING letter, quoted from *Fire* magazine (British), regarding the plight of the volunteer fireman caught with his best clothes on when the siren blows, will strike a responsive chord in the hearts of many American volunteer firemen.

"Now that so many fire brigades will have to rely upon retained firemen, as so many did before the war, a uniform should be designed to enable these men to dress quickly for fire ground duties. The present uniform is useless when it comes to dressing quickly and valuable time is lost at night by part-timers donning the clumsy tunic and trousers.

"At the best of times, fighting fires is not a clean job, and in these days of clothing coupons one cannot afford to risk damaging one's own clothing.

"My own case is possibly a good illustration, but there must be hundreds of men in a similar position. As I am a pharmacist, I have to be fairly neatly dressed, if I am not to convey to my customers the impression of slackness and indigency. My professional uniform consists of 'city' trousers surmounted by a reasonably clean white coat. Hardly the right kind of clothing for fire fighting.

"My shop is a quarter of a mile from the fire station and so there is no time to change, as I only just reach the station in time to leap on the appliance as it comes out of the yard. At the best of times, I can only manage to don a tunic which leaves my city trousers to the mercy of dirty water, flying embers, and other damaging matter likely to be found at the scene of a fire.

"The most useful uniform for retained firemen, both for changing into during the day and donning quickly at night, would be a one-piece suit made on the lines of the RAF flying suit. Such a uniform could be roomy enough to go over ordinary working clothes, and it would be a matter of seconds to don it while on the way to the fire.

"No doubt the old firm of Red Tape and Stint, Inc., will immediately raise the cry, 'think of the cost,' but in view of the fact that the firm is able to call upon our services 24 hours, day and night, and all for £15 ($60) a year, it surely can provide us with a suitable uniform that will give adequate protection to our own clothing and keep us reasonably dry. — *Man O' Kent.*"

In Britain fire fighters wear, as a fire fighting garment, a tunic somewhat resembling the uniform coat of American firemen and about as water- and smoke-repellent. Apparently they have not as yet discovered the convenience of having each volunteer's fire fighting garb (waterproof coat, long rubber boots, and helmet) carried on the apparatus in accordance with American practice. In mild weather and other emergencies, many firemen prefer to "take a wetting" rather than take the time to put on all of their fire fighting gear, but, fire department officers are rightly insisting that, insofar as possible, each man be dressed for fire duty.

The editor of *Fire* points out that the British Fire Service Department is experimenting with a quickly donned, waterproof fire fighting suit with a zipper fastner. Any man who has struggled with a zipper jacket while trying to get underway in response to an alarm will sympathize with the British firemen who may have to line up a zipper with cold fingers while riding a piece of moving apparatus. The good rugged snap buckles used by American firemen have many advantages. They can be manipulated easily, even by hands encased in frozen mittens. It is known that British firemen admired the fire clothing worn by Canadian firemen who assisted in fighting blitz fires.

Many American volunteer firemen still do not have proper protective clothing for quick turn-out to night fires. Many pull on a pair of old trousers, work shoes or boots, sweaters and odd jackets in order to get to the fire station where their fire clothing is on the apparatus. Alert volunteer and call firemen maintain a "night hitch" or turnout suit just as do all paid fire fighters when on night duty. Thus they are able to instantly clothe themselves in proper protective clothing, respond without delay, and are ready to go to work immediately when they get to the fire.

Huge Warehouse Blaze in Portland, Ore.

A THREE-ALARM fire, which was believed to have smoldered all night before it was discovered, destroyed a Union Pacific warehouse leased by a Portland transfer company.

The lower photo (taken from a helicopter) is a remarkable witness of what happens when fire sweeps a large property lacking adequate automatic protection. A night watchman had checked the door without detecting trouble and a merchant had visited the building at 7:20 A.M. without observing flames, but, at 7:40, fire was seen extending through the roof.

The upper photograph shows thirty fire companies pouring heavy turret streams into the third floor of the building. The limited penetration obtained by even such heavy siamesed lines is evident from the lower photograph, as the fire on the upper floor was controlled only adjacent to the windows facing the two streets.

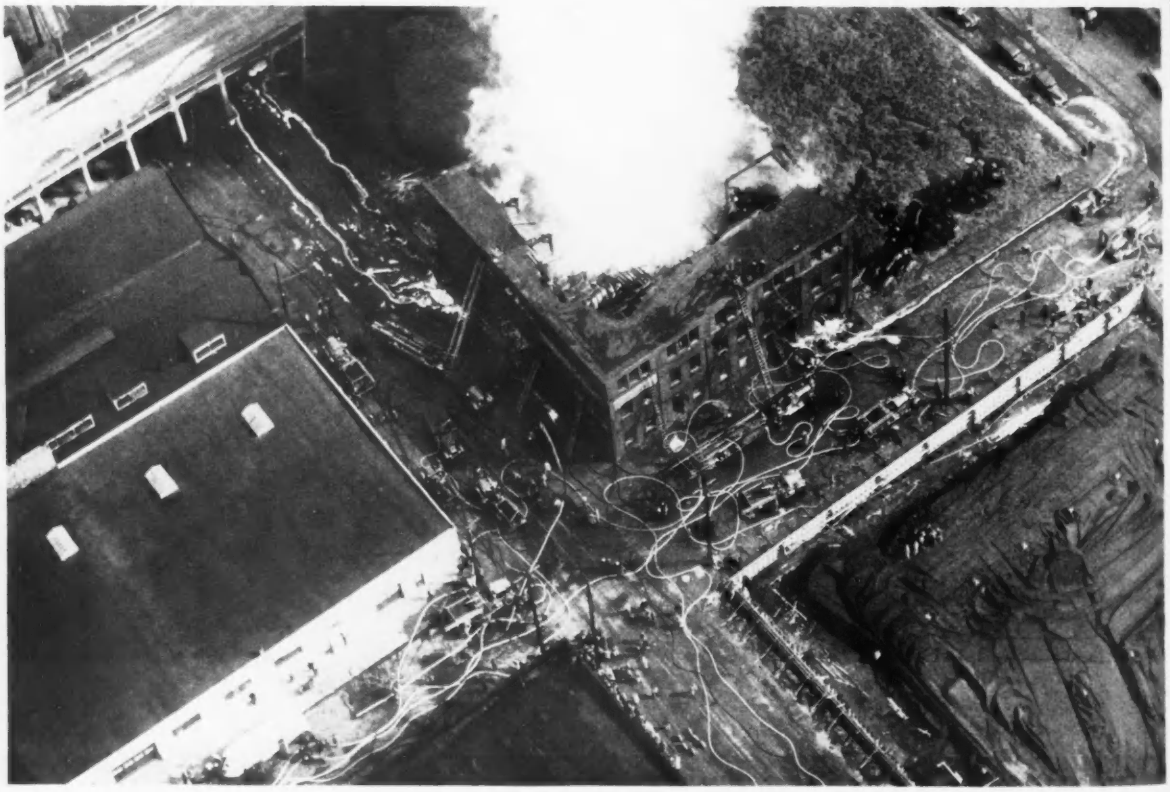
The pictures are also worthy of special study as an example of placement of companies and apparatus at a large fire. An aerial ladder was in position on each street and the building was laddered to both the second and third floors at various points. The large white bus-like vehicle in the lower left corner of the lower picture is the Jay W. Stevens Disaster Unit, which is perhaps the most completely equipped rescue and emergency van in the United States.

It is interesting to note the position of the various pumpers and turret nozzles. It will be observed that almost every pumper is equipped with a large turret nozzle.

It may also be noted that a hydrant at the street intersection immediately adjacent to the burning building was not used. This is proper procedure when fire is seriously involving a structure filled with combustible merchandise, providing other hydrants are available, because not only would the pumper have been in the way but it would have been endangered by falling walls, had the building collapsed.

The loss was estimated at $250,000.

Heavy streams are no substitute for automatic detection and automatic sprinklers.



Companies Effectively Placed for Attic Fire

SELDOM do fire departments encounter such a perfect set-up for their apparatus as occurred when a two-alarm fire swept the attic of this large Washington, D. C., mansion on a Saturday afternoon a few weeks ago.

When the first apparatus arrived, the enclosed attic space was seriously involved and, because of lack of ventilation, heavily charged with smoke. First-alarm response consisted of 4 engine companies (2 pumps each), 2 100-foot aerial ladders, and 1 rescue company.

No 16 engine, arriving first, took the hydrant as shown at the right of the building and laid out with their hose wagon (pumper) to the front door. In order to be sure of reaching the attic fire with their booster line while awaiting water from the big line, the wagon stopped immediately abreast of the front entrance and both lines were advanced up the stairway by members of the company. The men wore all-service masks and could proceed immediately to the seat of the fire, where they were assisted by members of the rescue company wearing self-contained air-pack masks. The heat and smoke were so intense under the heavy slate roof that it would have been impossible to approach closely to the seat of the fire without men trained in the use of mask equipment.

The second due company took the rear of the building and proceeded to the roof of the ell via ladders raised by a truck company. Third due engine advanced its line over ladders to get above the fire, and the fourth due engine took a rear position.

The first truck company extended their 100-foot aerial to the roof. It might be noted that the aerials are properly jack-knifed. The second due truck placed its aerial in a side position. The aerial shown in the center of the picture responded on the second alarm. A 50-foot extension ladder was raised to the third floor and a short folding ladder was taken over this and extended into the attic space where the fire was confined.

The four engine companies responding on the second alarm (two pieces each) advanced their lines over ladders to overhaul the fire in the roof which had been opened up by truck company men. However, the first alarm companies had the fire in hand.

It is interesting to note that the use of the 100-foot aerials, with which most of the district truck companies are equipped, permitted great flexibility in the placing of ladder trucks. Shorter aerials of 75- and 85-foot length could not have been used as effectively. Where buildings set back from the street they must be spotted with greater exactitude with respect to angles and distances from buildings. A chief precaution in the use of aerials is to prevent over-loading of the ladders when they are fully extended at a low angle.

It should also be noted that the District police did a remarkable job in keeping the streets clear of spectators and traffic, giving the fire fighters unhampered access to the fire ground.

Small Fire Station for Part-Paid and Part-Call Fire Department

There is no subject concerning which the editors of FIREMEN receive more calls for assistance than that of fire station planning. Each fire station (or "fire house" or "fire hall" as fire department buildings are called in various parts of the United States and Canada) should be designed by the best available architects to meet local requirements as to the prevailing architectural style, the needs of the fire department for housing men and specific pieces of equipment, the amount of money available, site, terrain, and many other factors. However, it is hoped that selected sketches of fire station designs and layouts to be presented from time to time in FIREMEN will prove helpful to many of our members.

HERE are plans for a comparatively inexpensive fire station housing two major pieces of apparatus for a suburban community. An officer and drivers will be on duty in the station, but paid call men or volunteer firemen comprise the balance of the crew. In a number of localities, the provision of paid drivers is an important factor in placing the local fire department in a higher fire insurance rating classification.

The overall dimensions of the building are 45 feet long and 29 feet wide. The apparatus floor has sufficient depth on one side to accommodate a small ladder truck or a pumper-ladder combination. There is also ample room for a pumper. A hose drying cabinet and hose rack are conveniently located at the immediate rear of the apparatus. There is generous room provided to permit men to work around both pieces of apparatus. A sink and storage lockers are at the rear of the apparatus floor.

For an alarm system, a fire alarm receiving cabinet with a punch tape indicating the number of the alarm box received is provided adjacent to the driver's seat of the pumper. The siren or air horn is on the cupola atop the roof. The air horn sounds the box number received so that the call men will know the exact location of the fire.

The basement is excavated only for a distance of 12 feet across the rear of the building, thus making the apparatus floor less costly to construct. It contains an oil furnace and hot water heater in a fire-retardant room having an incombustible ceiling. The heater room is separated from the remainder of the basement by a metal-clad fire door controlled by fusible links to prevent any fire in the heater room from spreading outside and endangering the equipment or building.

The balance of the basement is used for a storage closet and a water closet can be provided. A substantial door enclosure is provided at the head of the basement stairs. Stairways are of incombustible construction with a clear width of 3½ feet. The stairway to the second floor is located at the rear of the apparatus floor. Near the base of the stairway is an emergency exit operated by panic bolts and opening outward. This provides a rear exit in the event that the building is used from time to time as a place of public assembly, as may be the case in fire stations that also serve as community meeting halls upon the removal of apparatus to the outside.

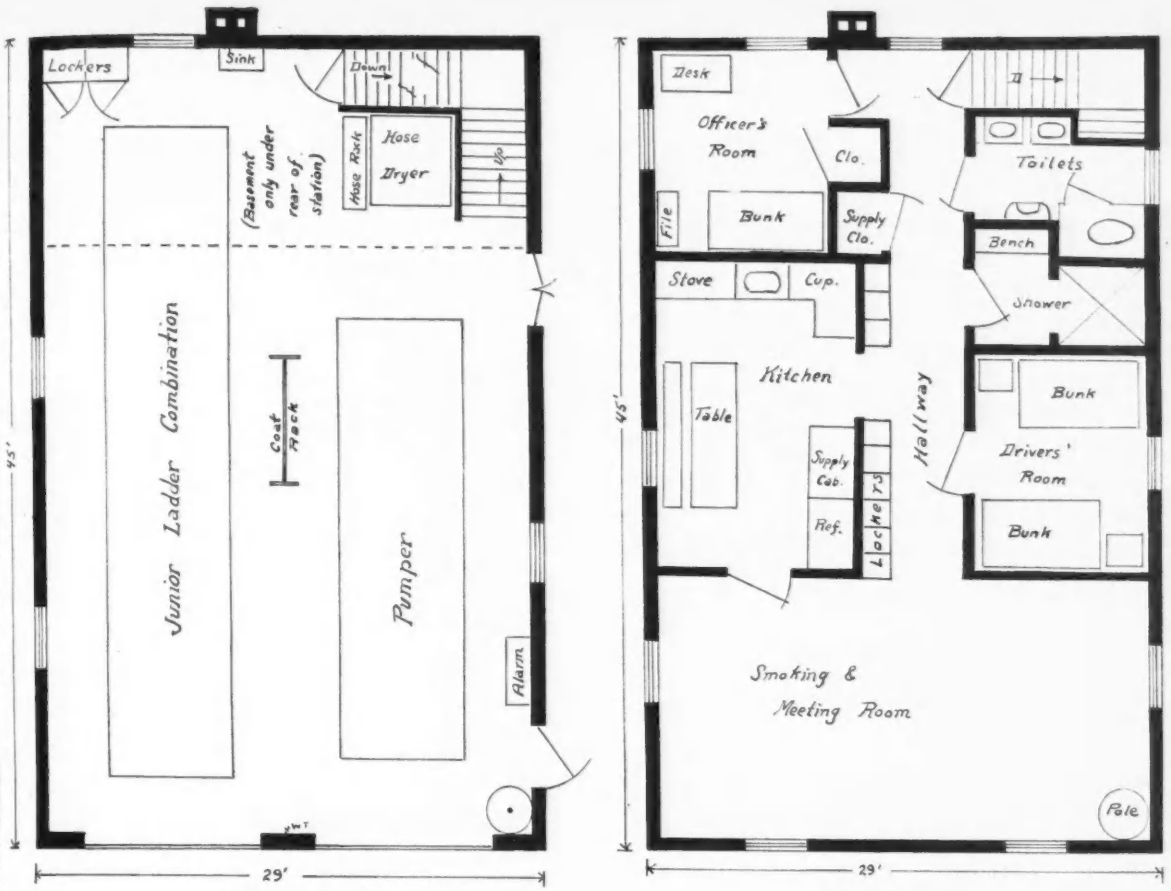
The second means of exit from the second floor firemen's quarters is a sliding pole at the extreme front adjacent to apparatus doors and the main front exit. At night the drivers use this pole, open the apparatus doors, verify the alarm from the tape register, and pull the apparatus out on the front ramp ready to roll when the first call firemen arrive.

The second floor contains a surprising amount of modern conveniences and facilities in a compact space. Opposite the head of the stairs is the officers' room with desk, bunk, and record file, as well as a large closet. From the stairway, a hallway lined with metal lockers and a supply closet passes toward the front of the building where a 14- x 28-foot smoking and meeting room occupies the entire front. This provides space for volunteer and call firemen to conduct their company meetings and spend pleasant hours of recreation between alarms.

Directly in the rear of the meeting room is a well equipped combination kitchen and dining room 17 x 11 feet in size and having a large table around which the men gather for evening coffee as well as for the other meals of the paid men on duty. Fire company suppers and after-fire collations also can be prepared in this kitchen.

Across the hallway are the washroom and toilets, a separate shower room for the paid men, and the bunkroom for the drivers.

The exterior of the structure has been designed to make it acceptable in a residential district. The first floor is of masonry walled construction with two large overhead type apparatus



doors which conserve space on the apparatus floor. These doors are evenly spaced across the front of the building. A fire alarm box for public use is located on the front wall.

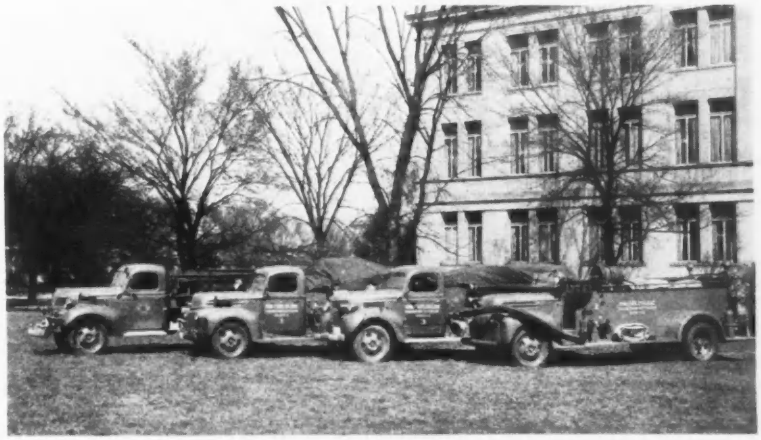
The apparatus floor is of concrete, painted, and well drained. There is a paved ramp or apron between the front of the building and the sidewalk sloping gently toward the street, on which the apparatus may be placed for cleaning or to permit the use of the apparatus floor for drill sessions and meetings.

The ceiling of the apparatus room is of poured concrete "pan type" construction, making the apparatus floor of fully fire-resistive construction. Walls of the apparatus room are of glazed brick or yellow tile to permit ready cleaning. The walls of the second floor and the roof construction are wood joist. The eaves line of the roof is kept low at each side so that the structure will not appear too massive for a residential district and to eliminate waste attic space. The roof is constructed with a 30-degree pitch and is surfaced with asbestos shingles. The ceiling above the second floor is insulated for heat conservation in winter and for greater comfort in summer.

To accommodate a third piece of apparatus with the growth of the community, it would be merely necessary to add a one-story section and a third overhead apparatus door at one side of the main structure, provided an additional 15-foot strip of land is available.

Provision also can be made for additional paid drivers by partitioning off one end of the smoking room.

No attempt has been made to present cost estimates, as these will vary with the construction costs in each locality and with the general fluctuations in building costs.



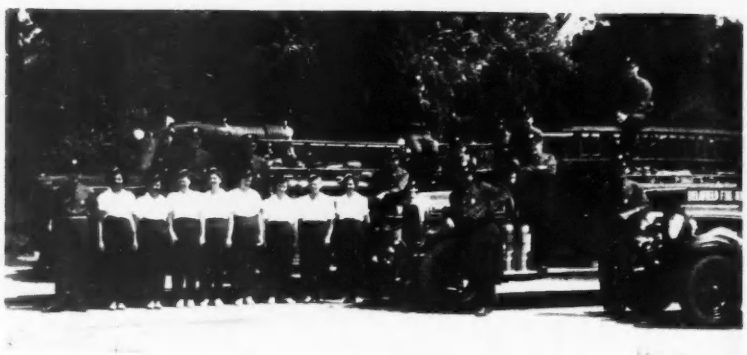
The Iowa firemen's training program under the direction of Fire Protection Engineer Robert C. Byrus has secured the four war surplus pumpers shown above for use in instructing pump operators in the volunteer departments of Iowa. Eighty operators received two days training on these pumpers during the 23rd Iowa Fire School.

Delafield, Wis., Fire Department

Reported by T. E. Evans

It is generally appreciated that the progress of most volunteer fire departments reflects the interest and enthusiasm of the men who serve it as officers and fire fighters. An example of this is the volunteer department in Delafield, Wis., commanded for 30 years by Chief Frank Webber.

T. E. Evans, of the Delafield Volunteer Fire Department (NFPA member) tells something of the history of the department.



The Delafield Volunteer Fire Department and the women's auxiliary.

AFTER leading the Delafield Volunteer Fire Department to hundreds of fires during the past 30 years in all kinds of weather, Frank Webber has retired as fire chief. At the annual election, held recently, he declined to run for re-election, but he indicated that when the alarm sounds he will be on hand to serve in the ranks and give the department the benefit of his long experience in fire fighting.

Chief Frank Webber with the portable pumper which is carried to all fires to use where the larger trucks cannot go.

During the past 30 years, the Delafield department has grown to be one of the best departments in the state. Back in 1917, the department started with a Model T Ford with two chemical extinguishers. Today it has two modern fire trucks, an auxiliary 1000-gallon tank truck for fighting rural fires, and a portable, two-man pumper.

For the most part, the department is self-supporting. The members stage an annual carnival and conduct dances during the year to raise money. Under Chief Webber, the Delafield firemen have conducted the local Red Cross drive and assisted in many others for years.

It is the spirit of co-operation with other communities which has won for the department the esteem with which it is held today. Under Chief Webber's leadership, the department has helped fight large fires, including one which raged through the business district of Oconomowoc in 1943. Locally it has fought several large fires at St. John's Military Academy.

Webber is employed as a mechanic with the highway department. Prior to joining the highway department, 18 years ago, he operated his own garage. He is vice-president of the Jefferson-Waukesha Counties Volunteer Firemen's Association and upon his retirement was made an honorary chief of the Delafield department.

The new chief, Thomas McNulty, has come up from the ranks, serving under Webber as lieutenant and assistant chief. He has been fighting fires with the Delafield department for more than 25 years. McNulty is a member of the American Legion and has been interested in youth organizations and conservation movements for years.

The Delafield Fire Department carnival attracts thousands of visitors as an annual event and nets over $1500 for the fire department.

Water battle at the fire department carnival.

A County Fire Organization

by Chief Leo J. Miller, of the Denison, Iowa, Fire Department

PUBLIC RELATIONS ARE ESSENTIAL to any fire department and a wonderful asset in the things they want to do. A county organization gives a department the opportunity to build up their public relations. There may be exceptions, but most volunteer departments come from small towns, towns of 100 to 10,000 people. Nearly everybody knows each other; they know the members of the department and what is going on in the town. If there is going to be a meeting of any importance, a good many of the citizens will know about the meeting. The local paper is always looking for news and will only be too glad to carry a story of the meeting, naming the different departments that attend, the subjects to be discussed, and the principal speakers.

The visiting departments will look over the equipment in the town where the meeting is being held and will take home new ideas that may work for their department, such as inspection, putting up ladders, ventilation, and salvage. All of this will create interest in the department and they will be drilling in these evolutions.

It won't be long before people will start telling how the department has improved and how they have cleaned up the fire station and equipment. Remember, we learn by seeing, by doing we become more efficient, and this will pay dividends in our public relations.

Equipment

It is sometimes a hard job for departments to sell the city fathers on the idea of buying new equipment. Many towns have only half enough hose. They may have 400 feet of hose and several spots where it would take 600 feet to reach the fire from the hydrant. A county organization can be a big help to these towns by arranging a demonstration of the different equipment, inviting the public, and showing them what can be done.

A few years back, our department bought a fog nozzle. We had attended the fire school at Ames (Iowa) and seen it demonstrated. We decided it was a good piece of equipment. We were going to entertain the next county meeting, so we planned a fog demonstration on putting out oil fires. We dug a pit and went to all the garages to ask them to save all the crank case oil they could.

On the night of the meeting, we put on a good demonstration with the fog nozzle and made it the topic for discussion. Everyone at the meeting could see what it would do and was all enthused about it. There was one chief at the meeting who was having trouble with getting the city fathers to buy anything, but he said, "I'm going to buy a fog nozzle with my own money, and if the city dads won't reimburse me, I'll carry it in my car and the first fire we have will try it out."

Continued on page 18

"Who's Who" on the NFPA Staff

This is the third in a series of staff portraits of the guiding lights about the NFPA Executive Office at 60 Batterymarch St., Boston. These are the men who write and edit the books, magazines, posters, and pamphlets published under the insignia of the National Fire Protection Association. These are the men to whom you can turn for answers to your fire fighting, prevention, or protection problems.

HORATIO BOND has been chief engineer of the NFPA since 1939 and is in charge of the field work of the Association, which includes the many contacts with members at home and abroad.

Mr. Bond came to the NFPA from the Massachusetts Institute of Technology in 1924 and has been a field engineer since 1925. The field work has involved maintaining contact with the various states and cities. By personal visits he has helped over 150 of the principal cities of the United States with their local fire prevention programs. On occasion this has involved making surveys of cities, including a survey of Boston in 1929, which has been widely used as a guide in other cities.

Mr. Bond says his work has made it necessary for him to become familiar with fire department matters. This has had practical application in his promotion of firemen's training programs. Great impetus was given to firemen's training by a survey he made in 1939. He originated *Volunteer Firemen* magazine in 1933 and edited it until just before the war. He wrote the first draft of the text *Municipal Fire Administration*, published by the International City Managers' Association. He was secretary of the Fire Fighting Services Committee of the recent President's Conference on Fire Prevention.

It has been necessary for him to travel a lot. During the war he estimated traveling in excess of 200,000 miles, including two trips across the Atlantic.

During the war he helped the U. S. Coast Guard get its port security program started and worked also with the Provost Marshal General's Office of the U. S. Army. In 1941, he was called in to help determine the amount of fire apparatus to be purchased for the defense of United States cities. He helped organize and was a member of the OCD Advisory Council of Fire Defense. He served the OCD in London in 1943.

Work on fire defense led naturally to work on the offensive features of fire warfare. Mr. Bond considers his most important war work the recruiting of fire technicians for the various government agencies concerned. He was consultant to the National Defense Research Committee and in 1945 visited England and Germany in charge of fire analysis of the U. S. Strategic Bombing Survey.

Mr. Bond has done the principal editorial work on a good many NFPA publications, particularly the following: *Employee Organization for Fire Safety, Industrial Fire Brigades Training Manual, Training Manual for Auxiliary Firemen, Fire Defense Programs, Fire Defense*, and *Fire and the Air War*.

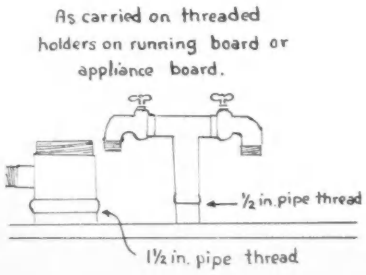
MAKING A GOOD JOB OF IT

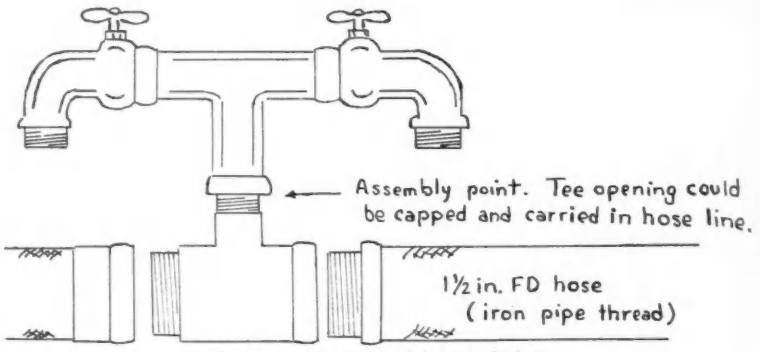
BY WARREN Y. KIMBALL

Holding the Woods Fire Line

ALMOST any fireman who has had extensive experience with woods and brush fires knows that one of the tedious and necessary parts of the job is to patrol a fire line after the hose nozzle has advanced far from the point where operations were commenced. In many departments, general practice is to wet down the fire line as quickly as possible, chiefly devoting attention to the actual burning edge. Stumps and burning materials inside the perimeter are allowed to burn themselves out. Along the edge of the fire where there is considerable ground duff, and particularly on rough or rocky terrain, it often happens that the fire has burrowed out of sight and rekindles or reappears long after the nozzle has passed.

Theoretically, it would be good practice to trench a fire line down to mineral earth, but frequently this is not practical in areas where fire departments may have numerous such fires in a single day and volunteers and call firemen must get back to their normal occupations as quickly as possible. The most satisfactory process seems to be to knock down the fire as rapidly as possible, working a line along each side of the fire from the initial point of attack until the fire has been surrounded; then patrol the line with pump tank extinguishers; and lastly, to overhaul the line carefully with water when the hose is being withdrawn. Often, if sufficient men are available (which is seldom the case), one or two skirmishers out ahead of the hose line and using back pack pumps will help check the fire at important points until the line can be advanced.





Improvised water thief for woods fires

The job of wetting down the fire line has become something of a science. Of course, the experienced brush fire fighter seeks to cut off the head of the fire if possible and makes his secondary attack from windward. If it is not possible to get ahead of the fire, it is attacked from each flank and narrowed down until brought under control.

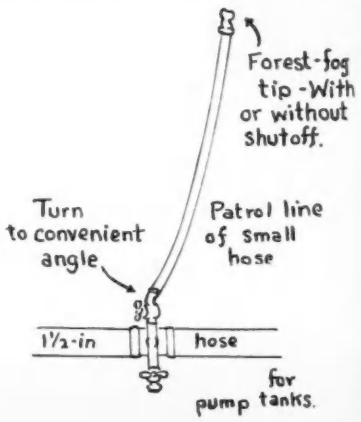
The first thought of the woods and brush fire fighter in suburban and resort areas is to protect the numerous residences, summer camps, and other property located in the wooded areas. Many costly estates are built in wooded sections to obtain seclusion. At times it becomes necessary to sacrifice acreage to protect buildings.

Within the past year, a number of rural fire departments have resorted to the use of wetting agents in the streams from their forest fire fighting equipment in order to get better penetration of ground duff. It is reported by some of these departments that this has greatly simplified the job of fire line patrol and lessened the number of rekindles.

Another important development has been the introduction of special fog nozzles for forest fire fighting. These discharge a narrow cone of fog along the fire line at a fairly high pressure, whereas a solid stream tends to overshoot the fire and an ordinary fog nozzle has too wide a pattern and wastes water. Forest fog tips of low capacity conserve the water supply carried in the tanks of forest fire trucks and reduce the friction loss in a given size of hose, as compared with the larger flows through conventional nozzles.

ONE of the best suggestions for a simple appliance to facilitate the patrol of woods fire lines is the pipe tee, illustrated on these pages, put in service in the Rockland, Maine, Fire Department under Chief Van E. Russell (NFPA member). Much of the 1½-inch hose in use in rural fire departments has standard iron pipe thread but other sizes of pipe tees could be used as required. A simple pipe tee supplying a ½-inch bleed-off or water thief would cost little. With the small outlet capped, it may be carried in the line of 1½-inch hose, but a more general practice is to insert the tee at a convenient point in the line. This tee supplies two ordinary faucets having outlets with garden hose thread. To one of these may be connected a patrol line of a good grade garden hose or booster hose supplying a forest fog tip or garden hose nozzle. The other side of the faucet is used for refilling pump tank extinguishers needed for patrolling the line. This is a device that can be made in almost any shop from stock items and will save many hours of heavy work along the fire line.

Various sizes of fire hose are used in woods and brush fire fighting. Many departments carry 500 or more feet of



booster hose on each rural truck. However, this hose is stiff and difficult to handle through rough woods country and results in high friction loss due to the small diameter. Many other departments use unlined forestry hose of 1¼- or 1½-inch sizes. While of use in the deep woods, where hose must be carried in back packs, these lines are comparatively slow to charge with water because time and water is lost while the hose is becoming saturated.

Cotton rubber-lined fire hose of 1½-inch size is popular with many fire departments for woods fire fighting. Experienced men would seldom attempt to advance a 2½-inch line through the woods, but this larger size is often used in pumper relays to keep water tank apparatus supplied which in turn will supply smaller lines. One of the most popular and easy to use sizes of forest fire hose is the 1⅛-inch cotton rubber-lined hose. It is an easy line to handle in the woods and is much more efficient in carrying water than the ordinary booster line. It is possible to supply several thousand feet of this size of hose with comparatively moderate pump pressures. The one difficulty is that adapter couplings must be used to connect standard booster or 1½-inch hose threads.

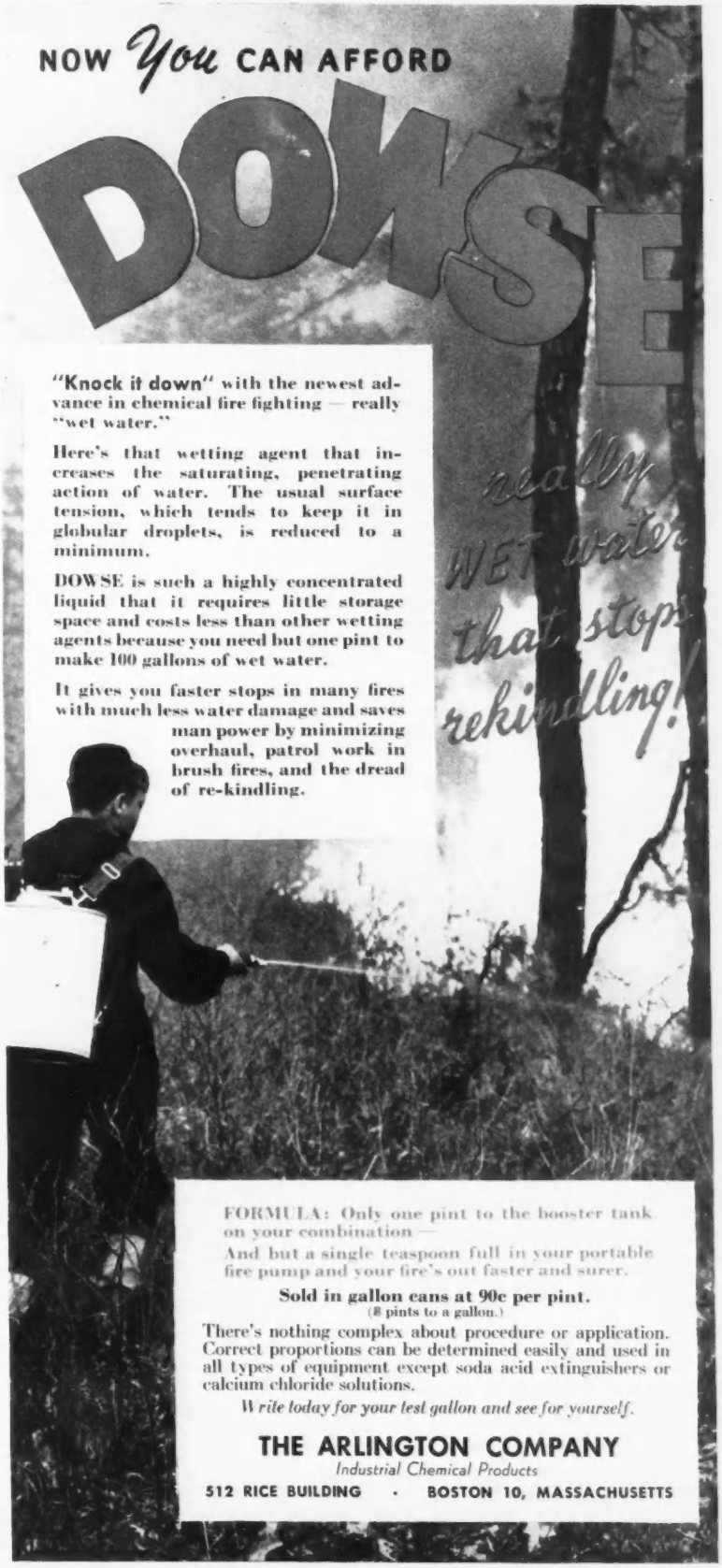
What Value Trained Airplane Crash Fire Fighters?

HERE is a case in point.

A non-scheduled chartered plane over-ran the runway at Newark Airport, N. J., on May 5 following a poor landing. The right engine of the two-engine DC-3 burst into flames as the aircraft struck the banks of a creek. The passengers were momentarily dazed by the sudden impact and remained in their seats. The pilot and co-pilot were trapped in the cockpit by the collapse of the aircraft's structural members.

The plane came to rest directly over a id spanned the creek supported by a series of heavy timber beams, spaced several feet apart, which had been placed over the ditch. These beams not only prevented the aircraft from nosing into the creek itself but also averted a real disaster since those portions of the wing which acted as the fuel tank supporting structure were saved from being crushed by the fact that the impact shocks were not directly applied. The tank areas rested between the heavy beams. This

Continued on page 21



"Knock it down" with the newest advance in chemical fire fighting — really "wet water."

Here's that wetting agent that increases the saturating, penetrating action of water. The usual surface tension, which tends to keep it in globular droplets, is reduced to a minimum.

DOWSE is such a highly concentrated liquid that it requires little storage space and costs less than other wetting agents because you need but one pint to make 100 gallons of wet water.

It gives you faster stops in many fires with much less water damage and saves man power by minimizing overhaul, patrol work in brush fires, and the dread of re-kindling.

FORMULA: Only one pint to the booster tank on your combination —

And but a single teaspoon full in your portable fire pump and your fire's out faster and surer.

Sold in gallon cans at 90c per pint.
(8 pints to a gallon.)

There's nothing complex about procedure or application. Correct proportions can be determined easily and used in all types of equipment except soda acid extinguishers or calcium chloride solutions.

Write today for your test gallon and see for yourself.

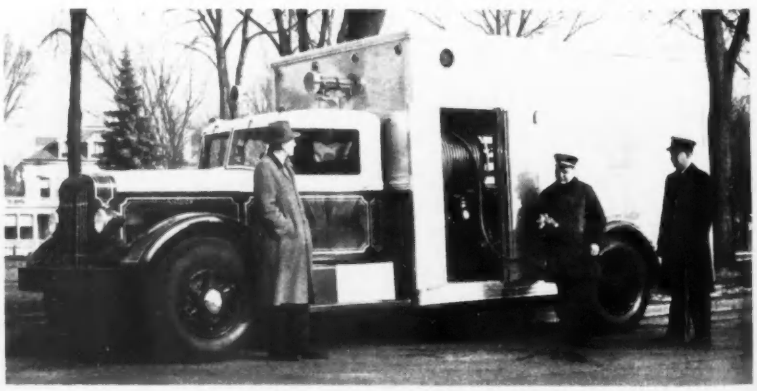
THE ARLINGTON COMPANY
Industrial Chemical Products
512 RICE BUILDING · BOSTON 10, MASSACHUSETTS

Endicott, New York, Fire Department Boasts Two New High-Pressure Trucks

THE ENDICOTT, N. Y. Fire Department has two new high pressure fire fighting trucks in service. One of these trucks, on an International chassis and equipped by Food Machinery Corporation with a 60 gpm high pressure pump, has been placed in service at Tri-Cities Airport. The second, also equipped by Food Machinery Corporation, is on an Autocar truck and is in service at fire department headquarters. This latter piece has an enclosed squad-type body and carries the following equipment:

1 pair asbestos gloves
1 asbestos suit
2 axes
1 axe, pick head
2 Amerco crash axes
2 brooms
block and tackle
2 blankets, woolen
2 No. 10 carbon dioxide extinguishers
16-inch chain, log
1 crowbar
1 claw hammer
1 claw tool
1 chimney chain
1 door opener
1 electricians pliers
first aid equipment: splints, bandages, etc., foil kit for burns
1 pitch fork
flares
1 generator, 1250 watt and 3 lights
1 5-gallon gas can
1 gate valve, 2½-inch
1 hand truck
1 hose hoist
2 hatchets
1 hydrant wrench
1 hack saw
2 hand saws
24 feet, 2½-inch hose
50 feet, 2½-inch hose
50 feet, ¾-inch hose
25 feet, Jiffy hose
2 hay hooks
1 gas shut-off key
keys for business and industrial places
2 life preservers
3 ladder ropes
1 light, red, oscillating
3 lights, flash
2 lights, red
1 light, big beam
3 life belts
10-foot ladder, folding
12-foot ladder, roof
22-foot ladder, extension
2 masks, oxygen
3 masks, smoke
1 maul
2 mops
1 mattress
2 metal bushel baskets
10 pounds assorted nails
2½-inch nozzle
¾-inch nozzle
1 oxygen tank, spare
2 pails
pole climbers
1 pike pole
1 radio, 2-way
1 resuscitator, 2 persons
100 feet, ⅜-inch rope
100 feet, ¾-inch rope
100-foot rope, life line
2 pair rubber gloves
500 feet roofing paper
4 salvage covers
spanner wrenches
150-foot steel towing cable
1 shovel
1 snatch block
1 tin roof cutter
2 tool boxes
1 trouble light
1 wringer, mop
1 24-inch wrecking bar
1 pair wire cutters
1 pipe wrench
wedges and shores
wheel blocks

Endicott's high-pressure squad truck with a 275-gallon tank. L. to r., Chief Edward J. Hart, Capt. John Gimmie, and Ass't Chief Paul L. Brown.



LaGuardia Field Crash

PROBABLY many firemen reading of the crash of a DC-4 commercial transport plane at LaGuardia Airport, New York City, in which forty-three persons died on May 29, may have reasoned that no successful fire fighting or rescue operations were carried out. The facts, however, are that the New York City Fire Department crash fire fighting unit, stationed at the airport, was able to effect several rescues despite adverse conditions.

One officer and ten firemen were at the scene within one minute after the man on house watch observed the crash at 8:06 P.M. Crash equipment consisted of 4 crash trucks, 1 1000-pound carbon dioxide truck, and a 2500-gallon tank truck. These were promptly backed up by 6 pumpers, 3 ladder trucks, and 11 ambulances responding on two alarms.

The crash occurred when the pilot tried to ground loop when a shift in wind prevented take off. The plane crossed a 15-foot embankment, losing the left wing. Possibly integral wing tanks containing 1300 gallons of gasoline were ruptured by striking jagged rocks. The pilot was thrown clear but forty-seven persons were trapped in the wreckage when the crash unit arrived. It is believed that none of these were killed in the impact, but those who could not be reached died of fire.

Fire involved the leading edge of the left wing and three-quarters of the fuselage. Marshy ground made the fire inaccessible on two sides. The crash unit stretched three high-pressure (600 psi) hand fog lines, operated two top turrets, set up and operated a foam hopper (oil and gasoline floating on the marshy surface kept re-igniting until covered with foam), placed a 16-foot extension ladder against the fuselage and cut a hole in the rear.

Two crash unit firemen entered the plane by the rear utility door and through the washroom to the passenger section and removed four passengers. One fire fighter entered through a burned-out section of the fuselage and removed one passenger. Seven additional passengers were removed by fire department personnel. Although all those rescued were badly burned, five had survived at the time of writing. Considering the fact that the crash unit had but eleven men for five trucks and no special protective clothing, these rescues are considered remarkable.

"IT DID A FINE JOB"

D. B. Smith & Co. Utica, N. Y.
I received my **INDIAN FIRE PUMP** yesterday and today I helped to fight a fire in a two-story building. The **INDIAN** did a fine job and showed itself up in great shape and I have had several people ask me where I got it. I think you have a fine fire fighter in this **INDIAN FIRE PUMP.**
(Signed) **Wesley Holcomb**

You, too, will praise the way an Indian Fire Pump does a job!

Once you have used these famous, clear water extinguishers you will say there is nothing like them for fighting fires in buildings, on roofs, and grass, forest and field fires. Big rust proof tank holds 5 gals. Any water supply serves for quick filling. Easy pumping throws 30 to 50 ft. pressure stream or nozzle adjusts to spray or fog mist.

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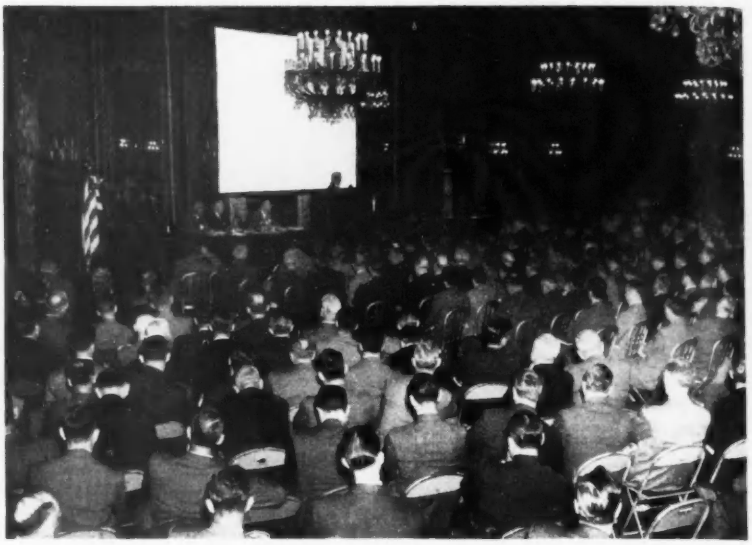
51st NFPA Annual Meeting

THE 51ST Annual Meeting of the NFPA, held at the Palmer House, Chicago, May 26–29, brought together fire service notables from many sections of the U. S. and Canada. Registration at the 4-day meeting reached 931.

Monday morning and afternoon sessions were devoted to the Fire Marshals' and Railroad Sections. At the opening meeting on Monday evening, Alvin E. Dodd, president of the American Management Association, discussed the "Importance of Fire Protection to Management." Richard E. Vernor, past president of the NFPA, reported President Truman's Fire Prevention Conference, recently held in Washington.

Of particular interest were the Tuesday evening general session on "Safety to Life from Fire," the Wednesday evening Fire Inspector's Forum, and the discussion of the Texas City disaster, Wednesday afternoon.



The NFPA membership which filled the Red Lacquer Room at the Palmer House, Chicago, for discussion of the Texas City disaster by representatives of government, industry, and insurance interests. Motion pictures and color film of the disaster were shown. On the rostrum is W. T. Butler, of the U. S. Coast Guard.

Left. S. H. Clarke described the organization of the new British Joint Fire Research Organization of the Department of Scientific and Industrial Research (government) and the Fire Offices' Committee (insurance). Mr. Clarke is its director.

Lower left. Address by Lloyd Layman, Parkersburg, W. Va., commander, U. S. Coast Guard Reserve, on "Control and Extinguishment of Fire Aboard Cargo Vessels." At the left is Chairman A. J. Smith, of the NFPA Marine Section.

Below. Some of the fire service representatives at the Annual Meeting.

L. to r., Chief Frank C. McAuliffe, Chicago Fire Insurance Patrol, vice-president, International Assn. of Fire Chiefs; Chief C. A. Delaney, Lakewood, Ohio, president, International Assn. of Fire Chiefs; Chief A. J. Mullaney, Chicago Fire Department, NFPA director and member of NFPA Committee on Firemen's Training; Deputy Chief John Redmond, president, International Assn. of Fire Fighters; Deputy Chief Harold J. Burke, who recently headed the civil service list of candidates in the examination for chief of the Fire Department of New York City; Fire Marshal W. J. Scott, of Ontario, member of several NFPA committees, including firemen's training, and former chairman of the NFPA Fire Marshals' Section; Deputy Chief Edward N. Montgomery, chief of the Fire Prevention Bureau, Boston Fire Department, director, NFPA Fire Marshals' Section.

NFPA President Curtis W. Pierce, of New York, also president of the Factory Insurance Association, presided over the 51st Annual Meeting held at the Palmer House, Chicago, May 26-29. President Pierce was re-elected for the 1947-48 term.

Chief C. A. Delaney, of Lakewood, Ohio, president of the International Association of Fire Chiefs, spoke on "Current Problems in the Fire Service."

Chairman W. A. Ross, of the NFPA Committee on Firemen's Training, delivering a report on "Current Developments in Firemen's Training."

Do You Want

- A NEW STATION?
- BETTER PAY?
- NEW APPARATUS?

BETTER
Public Relations Will Make Them Easier to Get

There is nothing particularly complicated about public relations. PUBLIC RELATIONS is nothing more or less than letting your friends and neighbors know just what the fire department is set up to do and what it is doing. You'd be surprised at the total number of people who are ignorant of the important job fire departments are doing. It's your job to tell them through your local newspapers, magazines and radio stations. There's a little trick in preparing material for press and radio but the new NFPA PUBLIC RELATIONS MANUAL FOR FIRE DEPARTMENTS covers the subject pretty completely. This attractive 6 x 9, 32-page booklet will be sent to you postpaid for $1. Write for it today to:

NATIONAL FIRE PROTECTION ASSOCIATION

60 Batterymarch Street, Boston 10, Mass.

HALE TYPE FZZ Portable Fire Pumping Unit

From Draft: 60 GPM at 90 lbs; 150 GPM at 30 lbs.

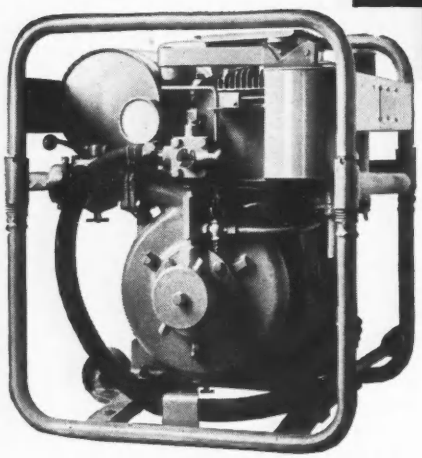
The new Hale FZZ centrifugal pumping unit is a powerful, rugged, ready-to-use unit built for portable or semi-portable use. Compact, dependable and efficient, it is built to stand long hours of continuous pumping. The unit will supply, from draft, 60 U. S. gallons per minute with a pressure of 90 lbs., up to 150 U.S. gallons per minute at 30 lbs.

The FZZ is ideal as an auxiliary for pumping into booster tank or direct into suction from stream or source of water which major pumper cannot reach with its suction hose. (See picture above.)

It can be mounted or carried on virtually any type of equipment, making it possible to fight fire while in motion, using a booster tank for source of water.

Simplicity in design and reliability are exemplified in the Hale single stage centrifugal pump, bolted direct to a 7.7 HP, four-cycle, single cylinder air cooled engine.

The Hale Ejector Priming system eliminates priming pumps, clutches or gears.



Above — FZZ Throwing Foam through 1½" hose line. Foam Proportioner built in if specified.

Left — Close-up view of FZZ in frame with carrying handles turned in. Can be carried easily by two men. NOTE: Hale FZZ portable pumping Unit is also available mounted on iron straps, or with two-wheel truck mounting on 12 x 2 pneumatic tires so that one man can wheel it easily where needed.

•

Write Today For FZZ Folder

HALE FIRE PUMP COMPANY
Conshohocken, Pa.

FIRE PUMPS IN ALL STANDARD CAPACITIES

A County Fire Organization

Continued from page 11

The chief bought the nozzle and took it with him to the next council meeting. The councilmen refused to reimburse him for it and said it cost too much money.

It was less than a week when a fire alarm came in. The fire was at the home of one of the councilmen. When the department arrived, smoke was coming out all the basement windows. The chief said, "We'll see if the fog nozzle will do the job." They put the nozzle on and turned on the water. One basement window broke and they shoved the nozzle and hose into the basement. In a few minutes the smoke cleared and the fire was out.

The councilman came over to the chief and said, "We'll pay for that nozzle and order another one." Since that time, that department has managed to get a new truck with a 500 pumper and all the trimmings.

Mutual Aid

After holding meetings in the different towns in the county, you become pretty well acquainted with the equipment that each department has, such as hose, ladders, and pumpers, and have a general idea what to send in case they call for help. If Carroll, Iowa, had a bad fire and needed help, we know that they want manpower, because they have plenty of equipment. If we were called to Charter Oak, we know that they need a pumper, hose, and manpower. In another town, all we need to do is throw 500 or 600 feet of hose, a couple of nozzles in a car or two and be on our way. This town has plenty of pressure and wouldn't need the pumper.

In the county organizations, this is what is accomplished: a better feeling among departments, gives the smaller departments more confidence in themselves, makes them feel they are one of us, and in case they need help they won't hesitate to call for it.

Meeting

The president calls the meeting to order and has the secretary read the minutes of the last meeting. Then it is customary to call on the host-chief for a few remarks. The chief may present the mayor or some member of the chamber of commerce. It is a good idea to have a person that is a booster for the fire department speak at the meeting.

It is also a good idea to have a roll call for the departments present, find out if they have had any fires since the last meeting, and, if so, call on them to tell about them, the kind of fire, and how they fought it. Some may want to ask questions or make suggestions on how the fire was fought. It is always well to have one or two subjects for discussion; have someone present the subject, then open it for debate. Many times this brings out good ideas and proves educational for those who are willing to learn.

The question box is always good. Remember there are a lot of fellows who will drop a question in the box, but who won't ask the question from the floor. These meetings should not last over an hour and a half, but keep them alive. Before adjourning, pick a place for the next meeting and the subject.

Good Fellowship

After every meeting serve refreshments. This is important, because here is where good fellowship is established. This will help to eliminate jealousy that exists in many departments.

The refreshments don't have to be much. Have a dutch lunch, coffee and doughnuts, ham sandwiches, oyster stew, or beer, depending on the community.

County organization with good officers that will arrange good instruction programs on public relations, equipment, hose and ladder evolutions, and fire tactics, with some sociability, will establish good fellowship and make it an easier job to have organized mutual aid. It will make your department a better department.

Reprinted from the Iowa Fire School "News Letter."

N.Y. Firemen's Tournament Rules

SECRETARY JAMES McINNES, JR., of the Nassau County Firemen's Association, has sent in the 1947 tournament rules for his organization and the Firemen's Association of the State of New York.

These rules are printed in considerable detail and would be of interest to fire departments planning various hose, ladder, or pumper contests. The complete list of rules for 1946 appeared in FIREMEN, August 1946.

For copies of these new rules, write to Mr. McInnes, secretary of the Nassau County Firemen's Association, Box 465, Syosset, N. Y.

CRYSTAL-CLEAR VISION AT ALL TIMES! that's the Scott Air-Pak

SELF-CONTAINED BREATHING APPARATUS

The lens in the full-vision face set of the Scott Air-Pak are ALWAYS clear.

The cool, clear, pure air prevents even the slightest mistiness—creating confidence—minimizing danger of stumbling or of confusing directions.

Throughout thousands of hours of rescue and industrial operational use, the wearers of Scott Air-Paks have been able to work with uninterrupted vision—permitting the highest efficiency and promptness of action.

—and that clear vision is one more reason for its widespread acceptance.

Your leading Safety Equipment House will be glad to demonstrate.

Bureau of Mines Approval No. 1308

...BREATHE FRESH, COOL AIR IN EVERY BREATHING HAZARD

NO OTHER BREATHING APPARATUS HAS ALL THESE VITAL ADVANTAGES

1. A quick-connect that cannot be cross threaded, easily and quickly engaged.
2. All-purpose working equipment—not just rescue apparatus.
3. A regulator—proved by thousands of hours of usage.
4. Fresh, cool air—not oxygen.
5. No complicated training or practice needed.
6. Absolutely clear lenses—no fogging.
7. A gauge specifically designed to provide a constant check on available air supply under all conditions.

Established in 1932

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FOR SAFETY—FOR SERVICE

SAFETY EQUIPMENT DIVISION

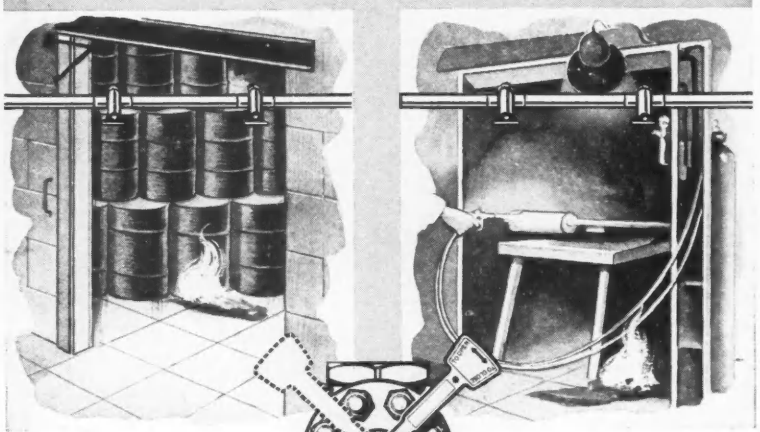
SCOTT AVIATION CORP.

236 ERIE STREET, LANCASTER, N. Y.

"THERE CAN BE NO COMPROMISE WITH QUALITY WHEN A LIFE IS AT STAKE"

One C-O-TWO system

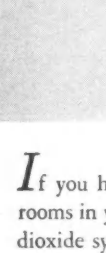
can protect two or more areas from fire



If you have two or more extra-hazardous processing areas or storerooms in your plant, you can safeguard them with one C-O-Two carbon dioxide system. The instant a fire starts in any one of the spots, simply turn a selector valve to flood the threatened space with clouds of cold, dry carbon dioxide gas. The fire is stopped quickly and easily.

C-O-Two is especially recommended for fires in electric equipment, motors, solvent tanks, spray booths, and flammable liquid storage. It is non-conducting, non-contaminating, non-deteriorating. It penetrates the smallest crevices and equipment, finishes, or fabrics.

Find out more about modern, clean carbon dioxide fire protection. Write for your free copy of "C-O-Two Kills Fire . . . Saves Life!"



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Sales and Service in the Principal Cities of U. S. and Canada
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Please send me your free booklet, "C-O-Two Kills Fire . . . Saves Life."

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Address_____

C-O-TWO

Hangar Fire, Big Springs, Texas

WITH only 250 gallons of water available in the booster tank of one fire truck, the fire chief recommended that the 72-foot square, 12-foot high, all metal hangar be left closed and that all efforts be concentrated on saving seriously exposed adjacent wooden hangars. This decision was as admirable as it was unusual. The following circumstances will substantiate this opinion.

The owner of the U & S Flying Service, at Big Spring, Texas, arrived at the airport at about 7:30 A.M. When he reached the hangar, he noted smoke coming from around the edges of the door. Unable to operate the lock quickly, he ran to the office and telephoned the fire department, which responded within five minutes. The chief noted, through a small door, that the entire hangar was filled with dense smoke and considerable flame, but that the welded steel pipe framework and the all-metal roof and walls were confining the blaze without imminent danger of structural collapse.

He knew opening of the main hangar doors would only aggravate the fire and supply it with more oxygen. His severely limited water supply would make fruitless any attempt at control. Protecting exposures required confining the flame and limiting radiant heat. The best manner for accomplishing this was to use the metal hangar structure as a natural barrier rather than to attempt control with the 250 gallons of water available.

The contents, thirteen light planes, were totally destroyed, the hangar structure slightly buckled and smoked, but the exposures were saved. A fire in this type of building (62,400 cubic feet) might have been successfully controlled with water fog, particularly if only a small opening were made, but lack of water was the critical factor which made any attempt fruitless in this case. Fortunately there were no explosions of partially filled aircraft fuel tanks.

This aircraft hangar fire is an unusual situation and the fire fighting technique is not standard practice. In most cases, it would be possible to get some supplementary water supplies to keep booster tanks filled. In such cases, it would be better to open the building enough to insert 1½-inch fog lines and keep the building filled with fog until fire was cooled sufficiently to permit overhauling.

This fire also should indicate the importance of cisterns or other water supplies at small rural airports. Had this sheet-metal building been erected on wood framing, as is often the case, it is possible that the hangar would have quickly collapsed and the fire spread to other structures.

Cause of the fire was failure of a hot electric lead between the point where it entered the hangar and an outlet receptacle about 4 feet above the floor level.

The loss was estimated at approximately $30,000.

Trained Crash Fire Fighters

Continued from page 13

prevented rupture of the fuel tanks and thus eliminated the probability of a large spill of gasoline which would have seriously handicapped fire suppression activity.

But, the engine fire was a threat. The trapped crew members were only about eight feet from the flames in the right engine and the fire was travelling into the wing and feeding on oil and hydraulic fluids as well as gasoline. The passengers were still in the cabin with safety belts in place. Loss of life by fire was still a tragic potential.

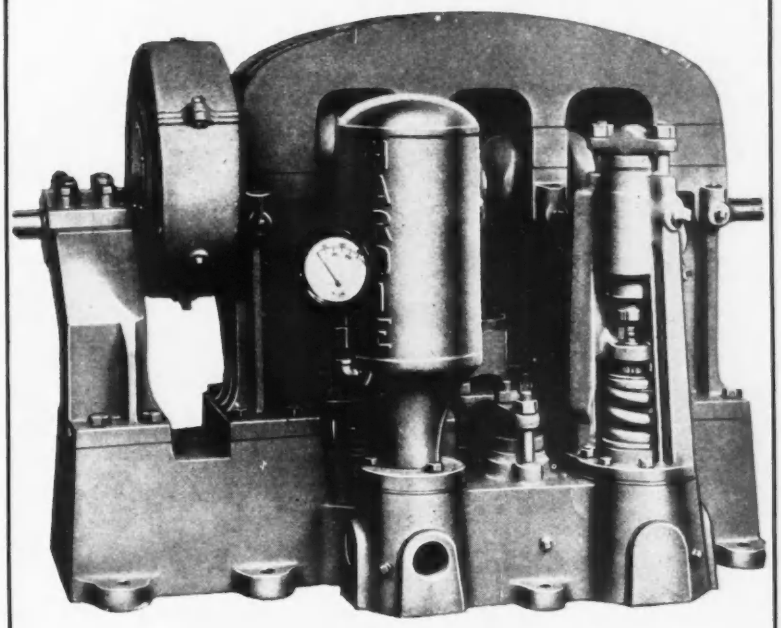
The saving factors of grace were that the control tower had noted the accident, alerted the Army Air Force crash crew maintained at this partly military and partly commercial airfield. The unit responded with a complement of trained men.

The engine fire was snuffed out, the pilot and co-pilot released (after use of crowbars and a hacksaw to free them from the crushed metal), and the passengers removed to safety, three seriously injured.

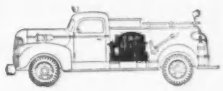
The presence of the trained crash crew saved the lives of 12 persons.

Too Many "Strikes" Against the Fire Department

FIRE destroyed the Arnold V. Walker boat yard, machine shop, and warehouse at Pascagoula, Mississippi, the night of May 6, with a loss of $146,000. The watchman drove to the fire station (telephone employees were on strike.) The nearest hydrant was 2,500 feet away and the fire department lacked that amount of hose. There was a dead low tide but the fire department took suction nearby. However, a large amount of shavings in the water caused the pump strainers to clog.



It's In The Pump



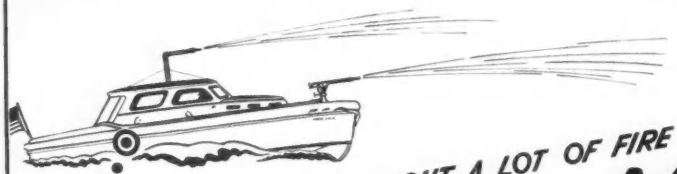
• The success of fog fire fighting depends squarely upon the pump. Pressure—not less than 800 P.S.I. —is a first requisite for finely atomized fog, intermediate spray, and hard, driving stream all of which are factors in the new science of quick fire control. Hardie Fog Pumps are built in two sizes. Above, the LCXA 2-gun pump delivers 60 G.P.M. at 800 P.S.I. The Hardie XCXX one-gun pump delivers 35 G.P.M. at 800 P.S.I. Hardie pumps are standard equipment in Fog Fire Trucks of many leading manufacturers. Specify a Hardie pump when you buy or reconvert to a fog unit. Write for catalog.

THE HARDIE MANUFACTURING COMPANY

Los Angeles 11, Calif. HUDSON, MICH. Portland 9, Oregon
Export Dept., Detroit 26, Mich.
Canadian Office, C. W. Lewis, Grimsby, Ontario

H·A·R·D·I·E

High Pressure PUMPS AND FOG GUNS for Fog Fire Fighters

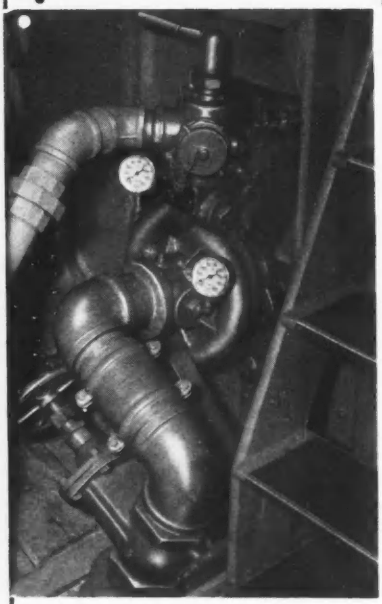


YOU CAN FIGHT A LOT OF FIRE WITH

600 G.P.M.

WITH DISCHARGE PRESSURE UP TO

250 LBS. PER SQ. IN.



BARTON-AMERICAN

Fire Pumps, available in several sizes for capacities up to 600 gallons per minute for discharge pressures up to 250 pounds per square inch, are furnished with geared transmission for direct connection to either main propulsion engine or auxiliary. These units can be direct connected to engines having operating speeds as low as 1200 RPM.

Barton-American Pumps are ideal for Marine fire fighting equipment because of their *light weight and compactness*. **The largest pump occupies less than four cubic feet and weighs less than 200 pounds complete with its transmission.**

They are furnished for either left or right hand engine rotation and are available with Siamese discharge valves, furnished with a discharge flange so that piping can be run from the pump to the hose manifold on deck.

Barton-American Pumps have over twenty years successful service and have met the rigid tests of the National Board of Fire Underwriters for use on municipal fire trucks. Barton-American Fire Pumps have been and are used by the Army, Navy, Higgins, Chris-Craft, American Export Lines, Pan American Airways, and many others. WRITE US TODAY FOR FURTHER INFORMATION.

AMERICAN-MARSH PUMPS, Inc.

BATTLE CREEK, MICHIGAN

AMERICAN-MARSH PUMPS

• *PUMP MANUFACTURERS SINCE 1873* •

Our Readers Say —

Dear Mr. Kimball:

We appreciate very much the photograph of the plastic pumper model reproduced on page 13 of the April issue.

It seems that no matter how well you do a job there is always some guy that has to kick and generally show lack of appreciation of your efforts. This isn't intended to be as bad as it sounds, but our new jobs are not cab-over-engine but cab-ahead-of-engine. There is quite a difference.

When we originally surveyed the fire departments for their ideas about what they wanted in postwar fire engines, we were told quite definitely that cab-over-engine was unsatisfactory for fire service. They gave three reasons:

(1) It placed the driver too high in the air.

(2) The engine noise in the cab was definitely objectionable.

(3) You couldn't get at the engine to service it properly. Adding oil to the engine during pumping operations, checking the oil level, and maintenance work on ignition and carburetor were too difficult and it made a mess of the cab interior. It was for that reason that we placed the engine back of the cab, which overcame these objections.

Cab-ahead-of-engine also overcame a fourth objection that some of them gave us, which was that the weight on the front axle was too great, resulting in hard steering. Placing the engine back of the cab overcame this objection also and resulted in extremely easy steering.

H. WALKER, *Manager*
M.F.A. Sales Engineering
American-LaFrance-Foamite Corp.

Dear Sir:

I wish to express the appreciation of the members of our company for your courtesy in printing the ad which sold our LaSalle ambulance.

The machine was sold to the Malvern Fire Company, of Chester County, Pa., who were the first to contact us personally after reading the ad.

Two other companies wrote us inquiring about the machine. They were the Randolph Engine Company No. 3, of Mt. Freedom, N. J., and the Horicon Fire Department, of Horicon, Wis. The names of the above companies were forwarded to two nearby fire companies who also have ambu-

lances for sale, pending delivery of new machines.

THEO. R. LAMPLUGH, *Chairman*
Ambulance Board
Linwood, Pa., Fire Company No. 1

Overseas

NFPA member Quentin A Bruce, 334 St. Vincent St., Glasgow, a member of the Glasgow Fire Brigade, is anxious to correspond with fire fighters in the United States in order to exchange ideas and views. Mr. Bruce states "it is my opinion that there is far too little personal contact with Britain and the U. S. with regard to fire matters."

Coming Events

July 20-25—18th Texas Firemen's Training School, Texas A & M, College Station.

July 28-31—17th Annual West Virginia Fire School, West Virginia University, Morgantown.

July 28-August 1—9th Annual Pennsylvania Fire School, Lewistown.

August 4-22—14th Annual Short Course of the Oklahoma Fire College, Stillwater.

August 8-10—Ohio State Firemen's Assn. convention at the Carter Hotel, Cleveland. Address all communications to Secretary M. W. Gifford, 5105 Market St., Youngstown 5.

August 19-22—Convention of the Firemen's Association of the State of New York at Catskill. First two days business session, third day a tournament, fourth day a parade.

August 28-30—19th Annual Convention of the West Virginia Firemen's Assn., Charles Town.

Smoky Stover is going to be at the Pennsylvania Fire School again this year. The men attending the fire school last summer will remember that the life-sized Smoky Stover cartoon was used to present the fire control lesson for the day. (With the assistance of an attractive young lady who unveiled Smoky's daily lesson.)

NOW READY

New

AKROLITE

FIRE FIGHTING EQUIPMENT

PERFECTED in 10 years of research, development and test, AKROLITE couplings, nozzles and fittings offer outstanding advantages:

★ Two-thirds lighter than brass—yet tensile strength and hardness superior to brass.
★ Exceptional ability to withstand shock.
★ High resistance to corrosion.
★ Smooth, lustrous finish that will not tarnish.

Write today for special folder giving complete details and specifications.

AKRON BRASS MFG. COMPANY, INC. • Wooster, Ohio

FIREMAN FREDDIE SAYS:
AkrOLite is strong and tough, yet so light,
For every fire fighting need it's just right!

AKRON BRASS
FIRE FIGHTING EQUIPMENT

TRADE MARK

MEARL FOAM

FIRE OUT... Stays OUT!

The all-climate, dependable
MECHANICAL FOAM EXTINGUISHER
It flows—covers—seals—extinguishes
» » » Highly effective on oil and gasoline fires » » » Use with any kind of water—at any temperature—in all makes of equipment.

Approved for use under
Joint Army Navy Specification C-266

Write for descriptive bulletin

THE MEARL CORPORATION
153 Waverly Place, New York 14, N. Y.

MIDWESTERN
Protective Clothing
for Men of Action!

Here's Protection and Comfort in Your Hazardous Work of Safeguarding Life and Property against FIRE!

Our policy remains as always . . . only the finest material is used in Midwestern products.

Raw materials to meet our rigid specifications are not available in sufficient quantities to supply the demand for Midwestern products. However, in order to deliver without delay, we refuse to buy inferior materials that will lessen the service you have a right to expect in Mackinaw Coats and all other Midwestern clothing.

As a result, we are unable to keep pace with the demand for immediate deliveries. But we pledge ourselves to maintain our reputation, to merit your confidence, by continuing to use only the highest grade materials. You will agree that the extra build-in comfort and long wear you get in Midwestern clothing make it well worth while placing your order now, so as to insure your department of adequate protection during the coming Fall and Winter season. There is no substitute for quality.

For complete information write the factory or call your Midwestern dealer, who can now show you our new fabrics made from natural rubber compounds.

Available for immediate delivery and subject to prior sale, all sizes firemen's short and ¾ boots.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO. MACKINAW ILLINOIS
Manufacturers of the Famous MACKINAW Coats

Burke Tops Civil Service List for Chief of FDNY

HAROLD J. BURKE, NFPA member stands a good chance of becoming New York City's next fire chief. Present borough deputy chief for the Bronx, Burke heads the civil service eligibility list for promotion to chief.

Chief Burke fought in both World Wars. In 1918 he served with the Army Signal Corps and, in 1941, he was commissioned lieutenant, USNR, and assigned to a mine sweeper in the North Atlantic. He rose to the rank of captain, formulated the Navy's fire fighting program after Pearl Harbor, and was decorated with the Legion of Merit Medal. An article on Captain Burke's Navy fire schools, which trained some 2,000,000 Navy men in basic fire fighting aboard ships, appeared in the December 1945 *Volunteer Firemen*.

Twenty deputy chiefs filed for the promotion test, which was originally scheduled for December 18 but postponed at the instigation of the Uniformed Fire Officers' Association. The reason given was that promotional examinations in the lower ranks should be given first so that there might be more candidates eligible to take the promotional examinations for chief.

The State Civil Service Commission took an interest in the matter of the postponement and sent an investigator to ascertain the reason. Subsequently the exam was re-advertised and finally held on February 13–14 with sixteen candidates participating.

The present acting chief of the FDNY, Frank Murphy (NFPA member), did not file for the examination but is understood to be in line for the new appointive administrative post of Chief of Fire Staff of the FDNY.

Water Pails Prove Poor Substitute for Calling Fire Department

FIRE destroyed the Consolidated Flour Mills of Hutchinson, Kansas, on May 1, with a loss of $280,000. Flames broke out in the head house atop the four-story frame mill when friction in a clogged elevator leg ignited a belt. Instead of promptly calling the fire department, employees first tried to free the belt and then threw buckets of water in the general direction of the fire. Both procedures raised quantities of dust and explosions spread flames through the mill. The blaze was beyond control when the firemen were summoned.

Remember This!

The Darley Hi-Lift is a turbine driven centrifugal pump, not to be confused with jet devices, which cannot equal the Hi-Lift for VOLUME of water delivered.

Before you buy check and compare VOLUME.

Modernize Your Dept. with A HI-LIFT

LIFTS WATER 100 FT.

$165 NOT INCLUDING SIAMESE

CHAMPION HI-LIFT SUCTION BOOSTER

30 DAY FREE TRIAL! BUY ON PROOF! MAKE YOUR OWN TESTS!

228 GALLONS PER MINUTE FROM A 57 FOOT LIFT

208 GPM WITH THE TRUCK 73 FEET ABOVE AND 165 FEET DISTANT FROM THE WATER

" . . . if it was not for the HI-LIFT the bridge would have gone and they could not let trains pass for weeks."

CHIEF BRIDGES, KENT, WASH.

CITY OF KENT
WASHINGTON

May 14, 1946.

W. S. Darley & Co.
Chicago 12, Illinois

Gentlemen:

May 11th, we had a fire on a Milwaukee Railroad bridge, 1,000 feet long. The trestle was constructed of heavy timbers and well creosoted. The river was near, and the water 35 feet down from the bank, and fifty feet away. We tossed in our Hi-Lift Suction Booster, and pumped water for two hours steady and saved the 1,000-foot trestle and bridge across the river. The Milwaukee office at Seattle called in four other fire departments and all they could do was look at the fire fighting that was being done by our department because we were the only ones that owned a Champion Hi-Lift Suction Booster. The General Manager, the Superintendent and all the high officials of the Milwaukee Railroad were at this fire and they sure were interested to see that little pump throw so much water. If it hadn't been for the Hi-Lift the bridge would have gone and they could not let trains pass for weeks. Once more we made the Seattle papers on the front page with your Champion Hi-Lift. They replaced three pilings and the trains resumed going over the bridge. There was smoke going up in the sky for 200 feet and flames the same.

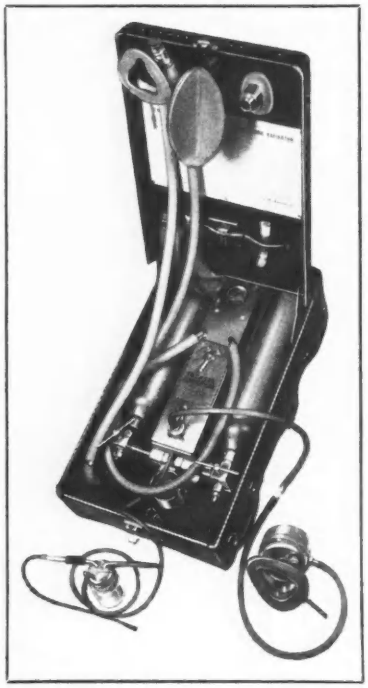
Yours truly,

Chas. Bridges, Fire Chief.

W. S. DARLEY & CO.

ESTABLISHED 1908
CHICAGO 12, ILL.

When Seconds Count
In Saving Human Life be sure you have an



EMERSON RESUSCITATOR

Leading fire departments throughout the country have from actual experience with serious cases given the Emerson resuscitator, inhalator, and aspirator the reputation of being America's finest lifesaving instrument.

Your men and community are entitled to this protection. Write for literature or a demonstration.

J. H. EMERSON CO.
24 Cottage Park Ave.,
Cambridge, Mass.
Representatives in Principal Cities

About Our Members

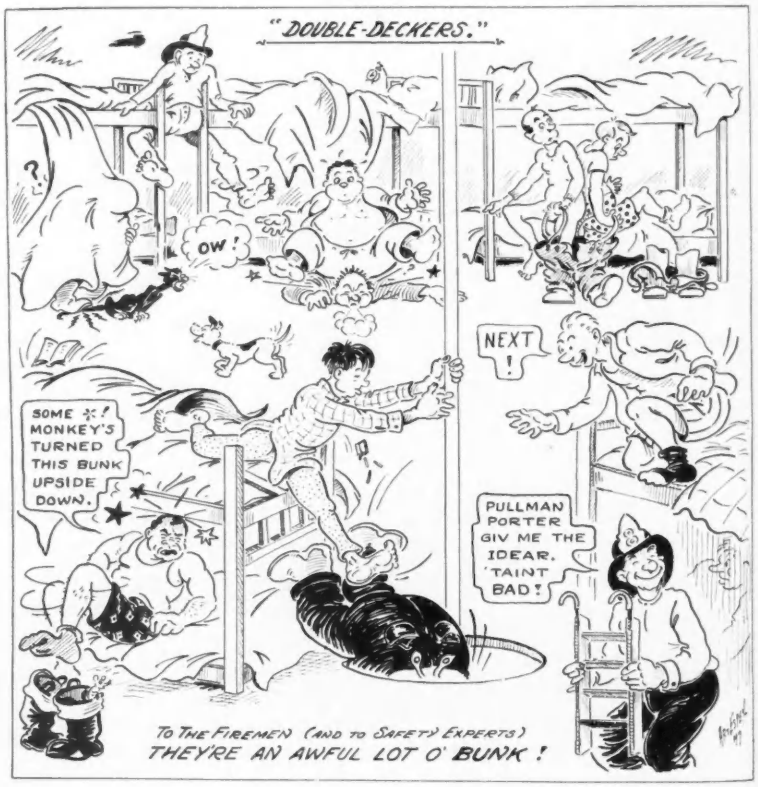
THE ALBION Volunteer Fire Department, of Albion, Pa., protects Albion Borough, Cranesville Borough, Conneaut Township, and Elk Creek Township with a total population of 8000. The 70-mile area includes various factories and shops. The department has three triple combination pumpers, considerable first aid equipment, including an inhalator, resuscitator and a rescue boat. The department also sponsors the local Boy Scout Troop and finances troop activities.

CEDAR KNOLL Engine Company No. 1 (member Cedar Grove Fire Department), N. J., was incorporated in August 1929. It serves a community of 5,000, covering an area of 80 square miles, largely rural. The Cedar Grove Fire Department has three stations, each of which elects an assistant chief of the department, as well as a captain and lieutenant for each company. M. S. Crosby is captain and A. Uccio lieutenant at Cedar Knoll.

New members are required to pass a 6-month's probationary period, and the company has taken the University of Maryland's firemen's training course. Company members attending at least 65 percent of alarms receive $30 pay per year. There is a first aid squad with twenty-five Red Cross trained men who own their own truck and equipment. The company participates in hose laying and ladder raising contests conducted by the New Jersey Volunteer Firemen's Association.

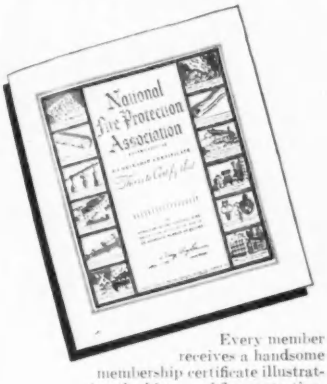
According to Secretary A. M. Robertson, it is hoped to add a jeep-type brush fire truck to supplement the 500 gpm pumper now operated by the company.

THE RADNOR FIRE COMPANY of Wayne, Pa., believes it was the first to have completely motorized equipment. A Knox combination chemical and hose truck was placed in service in 1906 and a Knox pumper equipment with Waterous pump in 1908.


"DOUBLE-DECKERS."
OW!
NEXT!
SOME ☆! MONKEY'S TURNED THIS BUNK UPSIDE DOWN.
PULLMAN PORTER GIV ME THE IDEAR. 'TAINT BAD!
TO THE FIREMEN (AND TO SAFETY EXPERTS)
THEY'RE AN AWFUL LOT O' BUNK!

The city manager of a midwestern city, confronted with the problem of a station that had 21 men with only 17 bunks, conceived the idea of installing double deckers for the night shift. We have enlisted the aid of the famous fire service cartoonist, Art Espey, now with the Cardox Corporation, who has envisioned the results of a midnight alarm in that double decker bunkroom.

MEMBERSHIP REPORT



Every member receives a handsome membership certificate illustrating the history of fire protection.

THE number of volunteer fire companies in the Section now stands at 1,350 as compared with 857 in July 1943. The number of individual volunteer firemen receiving FIREMEN has increased from 17,002 at that time to 21,185.

National Fire Protection Association, International

Associate Membership

VOLUNTEER FIRE COMPANY SECTION ($10 annual dues) Eligible:

(1) all bona fide volunteer fire organizations in any community.

(2) all fire departments and companies in communities of less than 25,000 population.

(3) all industrial fire brigades.

Member volunteer fire companies receive ten copies of FIREMEN magazine each month, mailed to the homes of individual firemen. Beyond the ten, additional copies of FIREMEN cost $1 per year.

Volunteer Fire Company Section members, receive, at their headquarters, one copy of all publications sent to NFPA associate members.

ASSOCIATE MEMBERSHIP ($10 annual dues) Eligible: Individual fire department officers, firemen, and others interested in fire safety. NFPA associate members in the fire service receive: one copy of FIREMEN magazine monthly, the NFPA **Quarterly**, the monthly **News Letter**, technical standards, popular bulletins and posters.

All associate members have one vote in Association affairs.

New members of the Volunteer Fire Company Section are:

UNITED STATES

Albion Fire Dept., Inc., Albion, Pa.
Bauerstown Volunteer Fire Dept., Pittsburgh 9, Pa.
Buechel Volunteer Fire Dept., Inc., Buechel, Ky.
Cedar Knoll Engine Co. No. 1, Verona, N. J.
Central Heights Volunteer Fire Dept., Globe, Ariz.
East County Line Fire Dept., St. Paul 9, Minn.
Gaastra Volunteer Fire Dept., Gaastra, Mich.
Mascoutah Fire Dept., Mascoutah, Ill.
Morrisville Fire Dept., Morrisville, Vt.
Petersburg Volunteer Fire Dept., Petersburg, Alaska
River Edge Fire Co. No. 2, North Hackensack, N. J.
Rockland State Hospital, Orangeburg, N. Y.
Rye Volunteer Fire Dept., Rye Beach, N. H.
Scarborough Fire Dept., Engine No. 3, Scarborough, Maine
Smithville Volunteer Fire Dept., Smithville, Mo.
South Lockport Fire Co., Inc., Lockport, N. Y.
U. S. Atomic Energy Commission, Oak Ridge, Tenn.

CANADA

Greenwood Volunteer Fire Dept., Greenwood B. C.

PROPELLO-RAY *LIGHT*

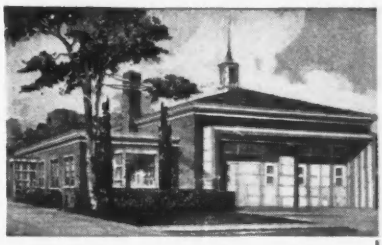
Simultaneously alerting pedestrians and all traffic . . . while insuring safety to your vehicle and crew . . . the compelling effect of the Propello-Ray's roving blade of red light gets you *through*.

Double action means quicker re-action—for the natural warning of red is intensified in the Propello-Ray Light by a sweeping, rotating beam that can't be ignored.

Any hour . . . any season . . . the urgency of your call is dramatically announced with scintillating silence . . . there are no noisy gears or complicated parts in the high candlepower, sealed-beam Propello-Ray Light. All moving parts are handsomely encased in streamlined chrome weather-proof housing to guarantee dependable, satisfying service.

FEDERAL ELECTRIC COMPANY, Inc.
8717 SOUTH STATE STREET • CHICAGO 19, ILLINOIS

Better **FIRE STATIONS** *with* CIRCUL-AIR
THE AIR-CONDITIONING



FIRE HOSE DRYER

We're sure you want your new stations to be of **Modern Design**, simpler . . . streamlined houses in keeping with the times . . . with better lighting, heating, adequate alarm systems, finer apparatus and **FASTER HOSE DRYING.** In eliminating the costly, ugly hose tower of the "gay 90's" **CIRCUL-AIR** improves building appearance and lowers construction cost. Efficient and practical for large central stations, they are ideal for "bungalow" type houses, for villages, townships and fire districts where time-saving, space and costs are decisive factors.

BETTER HOSE DRYING *for* OLD STATIONS *too!*

Without adequate drying equipment, or with towers in need of repairs they are most economical and efficient. Cheaper than a tower, more compact than a drying rack, faster and easier to use than either.

ASK A CHIEF WHO HAS ONE

Or Write for Descriptive Booklet

The CIRCUL-AIR Corporation
NEW ADDRESS
575 E. Milwaukee St. -:- Detroit 2

CAN PAY FOR ITSELF IN SIX MONTHS

By eliminating Dry Batteries

5" TRUE parabolic, silver plated reflector; 25,000 c.p. beam; 1/3 mile range; sturdy metal case; corrosion proof terminals

Only 72 ounces • Will not spill in ANY position

Battery change in 10 seconds without returning to factory

NON-SPILLABLE RECHARGEABLE

Type G-23

MASTER-LIGHT

for FIREMEN
POLICE and WATCHMEN

Write for new Emergency Lighting Bulletin

CARPENTER LIGHTS

168 MASTER-LIGHT BLDG.
Boston 45
SOMERVILLE, MASS.

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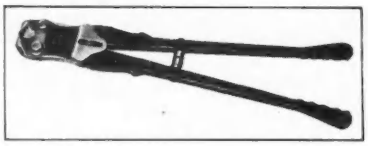
When you write to advertisers, please mention FIREMEN

MANUFACTURERS' ANNOUNCEMENTS

New Bolt Cutter Announced by Manco

The Manco Manufacturing Company, Bradley, Ill., has announced a new Carolus Type Cutter incorporating certain improvements over former models.

The new model features drop forged handles instead of the conventional malleable iron castings adding strength and improving the appearance of the tool. New design has substituted socket screws in the adjusting sections in place of protruding bolts avoiding breakage and bending, many skinned knuckles, and facilitating work in close places. Countersunk eccentric head strap bolts maintain factory set tension on the head assembly and provide a much cleaner appearance.



According to the manufacturer, another unique feature of the Carolus Type Cutter is the 2-way cutting jaw providing both side and end cutting action which is of considerable practical value as the end cut enables the operator to cut bolts in hard-to-get-at places. These cutting jaws are also available in a 3-way combination incorporating a nut splitter.

Through compound leverage, the application of 100 pounds pressure gives 4 tons cutting power at the jaws. Easily portable, the tool, according to the manufacturer, offers many time-saving advantages over the use of a cold chisel or blow torch for the many jobs which require the cutting of bolts, rod or wire. It is designed to cut all metals up to the hardness of case hardened steel. Special tools are available for cutting hardened material. For complete information, write to the manufacturer. Ask for bulletin No. 10.

★ ★ ★

Important Announcements by General Detroit Corp.

The incorporation of a new Canadian subsidiary with offices and warehouse in Toronto and Montreal, and two new additions to their line of carbon dioxide fire extinguishers are announced by E. A. Warren, Vice President of The General Detroit Corp., Detroit, Michigan.

The new subsidiary, called The General Detroit Corp., Canada, Ltd., will serve the entire Dominion in the same way that General's other subsidiary, The General Pacific Corp., Los Angeles, serves the United States west of the Rocky Mountains.

These new extinguishers, a 5-lb. and a 2½-lb. size, replace the 4-lb. and 2-lb. CD-Sno Fog carbon dioxide extinguishers respectively.

In making the announcement, Warren said, "These new CD-Sno Fog extinguishers are being marketed at the same price as were the ones they are replacing. By making the change, we are offering 25% increased fire fighting effectiveness at no increase in price."

The new CD-Sno Fog extinguishers have been designed to fit in the same wall brackets that were used on the units they are replacing, thus obviating the necessity of anyone owning brackets for the old models to purchase new ones. The 2½-lb. size incorporated a changed design of the extinguisher shell which leaves the overall weight lighter than the 2-lb.

size, without sacrifice of structural strength.

Complete specifications of the new 5-lb. and 2½-lb. CD-Sno Fogs may be obtained by writing The General Detroit Corp. 2272 East Jefferson Ave., Detroit 7, Mich., or The General Pacific Corp., 1800 South Hooper St., Los Angeles 21, Calif.

★ ★ ★

American-Marsh Publishes Leaflet

A new leaflet describing the features and new refinements incorporated in their "Duplex-Multistage Centrifugal Fire Pump" has recently been published by American-Marsh Pumps, Inc., of Battle Creek, Mich. Although this style pump has been in production for more than eight years, the manufacturer states that the current model offers many refinements. A copy of the leaflet will be sent on request to the company.

Some Places They Say

"It's a RIPE ONE!"

But Everywhere They Say...

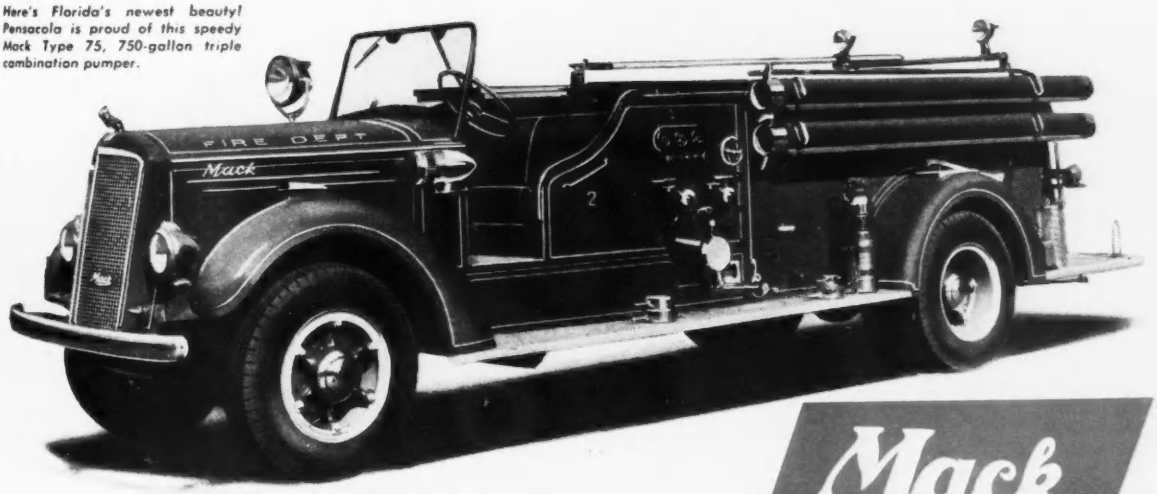
"Macks Stand Up Better"

● Speaking of fires, in some parts of the country you'll hear firefighters say "It's a ripe one!" when stretching into a location that's heavily charged with smoke. Speaking of apparatus, in departments all over the country you'll hear experienced firemen say "Macks *stand up* better!"

There's small wonder that dependable Macks enjoy this reputation. For 37 years Mack fire apparatus have been precision-built in Mack's own factories to advanced and exacting engineering standards. Beneath their gleaming modern appearance lie the rugged engines and running parts, the stout frames that only Mack's great facilities can provide. And Macks stand up better not only through the strain of hard firefighting conditions, but also under the wear and tear of responding to alarms.

When ordering your new apparatus, *Modernize with Macks!* In over 1,000 departments, Macks of all sizes and specifications are showing the way to greater performance and dependability.

Here's Florida's newest beauty! Pensacola is proud of this speedy Mack Type 75, 750-gallon triple combination pumper.



Mack FIRE APPARATUS

FIRE APPARATUS DIVISION
MACK MANUFACTURING CORPORATION
Long Island City 1, New York, N. Y.
Factory branches in all principal cities for service and parts. In Canada, Mack Trucks of Canada, Ltd.

5177

TRIPLE COMBINATION PUMPERS—500 TO 1,250 GALLONS . . . SQUAD WAGONS . . . CITY SERVICE AND QUADRUPLE COMBINATION LADDER TRUCKS

DELAYED ALARMS

CAUSE FIRE DISASTERS

WHEN FIRE OCCURS——PULL A FIRE ALARM BOX

IMMEDIATELY!

"It is generally recognized that there is no other thoroughly satisfactory means of sending and receiving fire alarms than an approved fire alarm telegraph system. Telephones should not be relied upon to replace needed boxes nor to supplement any inadequacy in number or location of boxes."

—National Fire Protection Association

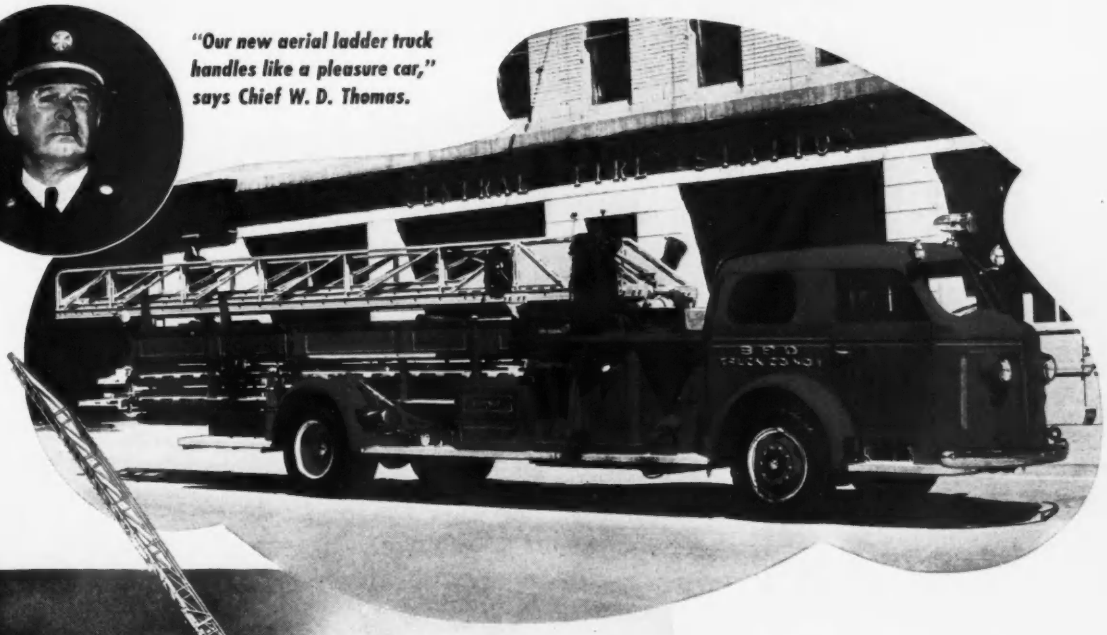
DETAILED INFORMATION ON REQUEST

THE GAMEWELL COMPANY

NEWTON UPPER FALLS 64, MASSACHUSETTS

IN CANADA: NORTHERN ELECTRIC COMPANY, LTD., MONTREAL

"Our new aerial ladder truck handles like a pleasure car," says Chief W. D. Thomas.



BINGHAMTON, N. Y. receives first of the new AMERICAN-LAFRANCE Aerials

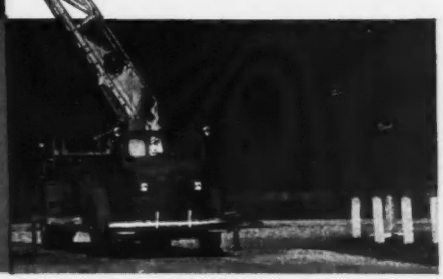
The new American-LaFrance cab-ahead-of-engine aerial has exceeded every expectation for performance. Replacing a city service ladder truck, the 85-foot aerial ladder is new to the men, but they handle it like veterans with years of aerial experience.

Short overall length—easy handling in traffic—with ability to make short turns in narrow streets, has proven the superiority of these new aerials.

The aerial ladder built of high-tensile corrosion-resisting steel, with full hydraulic power, provides fast, safe and sure operation. For rescue or water tower use, the American-LaFrance aerial has no equal in the fire service.

RECENT AERIAL DELIVERIES HAVE BEEN MADE TO

Lawrence, Kansas
Liberty, New York
Salisbury, Md.
Kansas City, Mo.
Fort Worth, Texas
Kansas City, Kan.
Marion, Indiana
Duquesne, Pa.



AMERICAN-LAFRANCE-FOAMITE CORPORATION
ELMIRA, NEW YORK, U. S. A.

LAFRANCE FIRE ENGINE—FOAMITE LIMITED
TORONTO, 9, ONTARIO, CANADA

SPENCER, N. Y. *Standard FMC Fog Fire Fighter delivered to the Spencer Fire Department.*

ARLINGTON, ILL. *Standard FMC Fog Fire Fighter delivered to Arlington Fire Protection District.*

MENDOTA-TROY, ILL. *Standard FMC Fog Fi Fighter delivered to Mendota-Troy Rural Fi Protection District.*

CHIEF SAYS:

A prominent Chief in a large city says, "We are getting many compliments from property owners about no water damage and about our speed in putting out fires with our FMC High-Pressure systems."

PHARR, TEXAS. *Standard FMC Fog Fire Figh delivered to Pharr Fire Department.*

That's not surprising. The facts of FMC fire-fighting efficiency are true everywhere—whether population is three-million, three-thousand, 300 or even less.

FMC High-Pressure Fog does more quenching—with only a fraction of the water needed by old-type units. This is what hundreds of FMC users have learned by their own experience fighting fires.

Stop the fire right where it is . . . cut to a minimum the old-time terrific water damage! That's the aim of progressive fire departments today. And that's exactly what FMC High-Pressure will do for you.

Get the facts! Investigate the FMC High-Pressure Fog Fire Fighting System.

PASADENA, TEXAS. *Standard FMC Fog Fi Fighter delivered to Pasadena Fire Departm*

UNDERWRITERS' LABORATORIES APPROVED

FLINT TOWNSHIP, MICH. *Standard FMC Fog Fi Fighter recently delivered to Flint Township Fi Dept. No. 1. Carries its own water supply provides two guns of 30 gallons each—850 lb pump pressure—complete in every respect.*

FMC *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY CORPORATION

JOHN BEAN MFG. CO., DEPT. 127, LANSING 4, MICH. • BEAN-CUTLER DIVISION, 426 JULIAN ST., SAN JOSE, CALIF.

BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS